Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 – 16 (canceled)

Claim 17 (new): A system for monitoring a machine, said system comprising:

a) a machine monitoring device connected to said machine, said machine monitoring device comprising:

i) input means connected to said machine for receiving inputs from said machine;

ii) an engine connected to said input means for performing transformations on said inputs, wherein said transformations apply a mathematical operation or a logical operation on said inputs to generate outputs;

iii) a database system connected to said engine to store said outputs; and

iv) report generating means connected to said database system for generating reports based on said outputs; and

b) a client computing device connected to said machine monitoring device by a communications network for receiving said reports to allow a user to monitor said machine from said client computing device.

Claim 18 (new): The system of claim 17, wherein said report generating means comprises a web server for transmitting said reports in the form of web pages to said client computing device.

Claim 19 (new): The system of claim 17 wherein said report generating means comprises a reporter module for automatically generating and automatically transmitting said reports to said client computing device.

Claim 20 (new): The system of claim 18, wherein said web server further generates web page user interfaces from which said user can configure said machine monitoring device, said transformations, or said reports from said client computing device.

Claim 21 (new): The system of claim 17 further comprising output means connected to said engine for transmitting output signals to said machine, wherein said engine performs additional transformations on said inputs, said additional transformations apply a mathematical operation or logical operation to said inputs to generate additional outputs, and said engine generates said output signals based on said additional outputs.

Claim 22 (new): The system of claim 17 further comprising output means connected to said engine for transmitting output signals to another machine, wherein said engine

performs additional transformations on said inputs, said additional transformations apply a mathematical operation or logical operation to said inputs to generate additional outputs, and said engine generates said output signals based on said additional outputs.

Claim 23 (new): The system of claim 17 wherein said input means comprises a digital input connector for receiving digital inputs from said machine.

Claim 24 (new): The system of claim 17 wherein said input means comprises an analog input connector for receiving analog inputs from said machine.

Claim 25 (new): The system of claim 21 wherein said output means comprises a digital output connector and said output signals comprise digital output signals.

Claim 26 (new): The system of claim 22 wherein said output means comprises a digital output connector and said output signals comprise digital output signals.

Claim 27 (new): The system of claim 17, further comprising at least one serial port for providing serial communications between said machine and said machine monitoring device.

Claim 28 (new): The system of claim 17 further comprising an Ethernet port for providing Ethernet communications between said machine and said machine monitoring device.

Claim 29 (new): The system of claim 17, wherein said machine monitoring device further comprises a configuration interface module for reading and writing configuration information, said configuration information being initially entered when said machine monitoring device is configured.

Claim 30 (new): The system of claim 29 wherein said configuration interface module maintains usernames, access and modification rights for said configuration information, and passwords for said user as part of said configuration information.

Claim 31 (new): The system of claim 18 wherein said web server comprises a reports CGI module for generating web page user interfaces from which said user may request said reports and enter parameters required for said reports from said client computing device.

Claim 32 (new): The system of claim 20, wherein said web server comprises a configuration CGI module for generating web page user interfaces from which a user may enter or view configuration information from said client computing device.

Claim 33 (new): The system of claim 18 wherein said machine monitoring device is a designated machine monitoring device connected over said communications network to a plurality of machine monitoring devices, said web server of said designated machine monitoring device generating a web page user interface comprising a list of said plurality of machine monitoring devices and permitting a user to select reports from one

9

or more of said plurality of machine monitoring devices for viewing from said client computing device.

Claim 34 (new): The system of claim 17, wherein said machine monitoring device further comprises drivers connected to said input means for converting said inputs into values associated with variables by said engine, said engine performing said transformations on said values to generate additional values for said reports, wherein said additional values are associated with report variables, said outputs are comprised of said additional values, and said reports are generated from said additional values associated with said report variables.

Claim 35 (new): A method for monitoring a machine comprising the steps of:

       a) monitoring inputs from said machine by means of a machine monitoring device connected to said machine;

       b) performing transformations on said inputs, wherein said transformations apply a mathematical operation or a logical operation on said inputs to generate outputs, said transformations being performed by an engine within said machine monitoring device;

       c) generating reports on said machine monitoring device, wherein said reports are generated by said machine monitoring device from said outputs; and

       d) transmitting said reports from said machine monitoring device to a client computing device on a communications network.

Claim 36 (new): A method for configuring a machine monitoring device connected to a communications network for monitoring a machine connected to said machine monitoring device, wherein said configuring comprises the steps of:

       a) determining desired reports and desired output signals from said machine monitoring device to said machine;

       b) identifying required inputs from said machine and required outputs for generating said desired reports and said desired output signals;

       c) defining transformations to be performed on said required inputs, said transformations applying a mathematical or logical operation to said required inputs to generate said required outputs;

       d) associating said required inputs and said required outputs with variables and report variables, wherein said variables store values for use in said transformations and said required outputs for output signals and said report variables store values for said required outputs for transmission in said desired reports;

       e) configuring said desired reports using said report variables and said desired output signals using said variables; and

       f) storing configuration information entered within said machine monitoring device.

Claim 37 (new): The method of claim 36, further comprising the step of configuring shifts and time intervals for use in said generating said desired reports.

Claim 38 (new): The method of claim 35, further comprising the steps of generating e-mail notifications and e-mail notification escalations and transmitting said e-mail

notifications and said e-mail notification escalations to said client computing device, said e-mail notifications and said e-mail notification escalations being generated by said machine monitoring device based on said inputs and said outputs.

Claim 39 (new): The method of claim 35, wherein said step of performing transformations is performed when a change in said inputs is detected during said monitoring, said step of performing transformations further comprising the step of storing changes to said outputs for said reports resulting from said transformations in a database system within said machine monitoring device.

Claim 40 (new): The method of claim 35, wherein said step of generating reports further comprises the steps of:

i) automatically generating a query by a reporter module within said machine monitoring device at configured time intervals or shifts;

ii) processing said query and transmitting data resulting from said query back to said reporter module, wherein said processing is effected by said machine monitoring device; and

iii) generating a report from said data to be transmitted automatically to said client computing device, said generating of said report being effected by said reporter module.

Claim 41 (new): The method of claim 35, wherein said step of generating reports further comprises the steps of:

i) entering the Internet Protocol address of said machine monitoring device to cause generation of a menu of available reports;

ii) selecting a desired report from said menu;

iii) generating a query for said desired report ;

iv) processing said query and transmitting data resulting from said query to a reports CGI module within said machine monitoring device, wherein said processing is effected by said machine monitoring device; and

generating said desired report from said data, said generating of said desired report being effected by said reports CGI module.

Amendments to the Drawings:

The attached Replacement Sheet of drawings includes changes to Figure 3. This sheet replaces the original sheet including Figure 3. An Annotated Marked-up Drawings sheet, which details the changes to Figure 3, is attached.

Attachment: Replacement Sheet
              Annotated Marked-up Drawings